

MONTHLY MEETING
Friday August 19, 2016
7:30pm

Our Saviors Lutheran Church
1035 Carol Lane Lafayette
License Testing 6pm
DX Interest Group 6:30pm

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National Coast Guard Day Aug 4



fldigi / flmsg

For this month's meeting, Klaus Berkner, K6KHB, accompanied by Djovida, KJ6DJ and Dave Piersall, N6ORB, will give a presentation on the digital mode fldigi/flmsg.

Amateur radio operators present ourselves as backup communications during major disasters. But are we really prepared to move large amounts of traffic when called upon?

Verbal transmissions are tedious and time consuming; however, fldigi and flmsg are two free applications that make it easy for anyone with a computer or laptop to transmit messages quickly and accurately. Join us for an overview of fldigi/flmsg capabilities.

To download *fldigi/flmsg* go to:

<https://sourceforge.net/projects/fldigi/files/>

For set-up guidance go to:

<https://www.youtube.com/watch?v=bN2QPZZzkn4&feature=youtu.be>

Watch the PACIFICON 2016 Promotional Video produced by Randy Hall, K7AGE on YouTube at:
<https://www.youtube.com/watch?v=zmJ86wvY4TU>



RFI CORNER

The RFI emitted by the Home Depot USB wall outlets reported in last month's CARRIER has been vanquished.

The homeowner investigated and located an improperly grounded switch which he immediately repaired...and the RFI immediately disappeared.

This is a great example of how cooperation and research with a non-ham neighbor resulted in a successful resolution to an egregious interference problem.

Meanwhile, on August 4, 2016, I was inside Terminal One at Gate 4 at the Oakland International Airport. I noticed numerous USB wall outlets installed around the seating area. I tuned in 125.0 MHz AM on my Radio Shack PRO-97 scanning receiver and all I heard was a loud buzz...I wonder what the Federal Aviation Administration would think of this RFI? See page 6 of this issue for the comments I filed with the FCC under Docket 16-191.

- *Matthew G. Vurek, N4DLA*

CORRECTIONS DEPARTMENT

Last month's issue incorrectly listed the Department of Veterans Affairs as the newest cabinet department. The **Department of Homeland Security** is the **newest** cabinet department (formed in 2002) while VA was elevated to cabinet status in 1989. The Carrier regrets this error.

ALL MEMBERS ARE INVITED TO JOIN
THE CLUB YAHOO GROUP.
DOWNLOAD FILES, INCLUDING *THE
CARRIER* IN **FULL COLOR** AS WELL AS
SHARE INFORMATION WITH THE
MEMBERSHIP AT:

<http://groups.yahoo.com/group/mdarc>

Mount Diablo Amateur Radio Club W6CX
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The Carrier is a monthly publication of the Mount Diablo Amateur Radio Club (MDARC). It is the policy of the editor to publish all material submitted by the membership provided such material is in good taste, relevant to amateur radio and of interest to MDARC members, and provided space is available.

President - Mike Patterson, N6JGA
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Jim Siemons, AF6PU

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Janice Fujii, KG6VTD Francis O'Leary, KF6FRJ

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Chair: Misa Siemons, KJ6BUE
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Treasurer: Jim Siemons, AF6PU
Secretary: Pete Harris, KE6ZIW
Web Page: Mike Patterson, N6JGA

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mdarcmembership@mdarc.org

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License Testing - Larry Loomer, KI6LNB
Public Service - Pete Harris, KE6ZIW
Outreach Coordinator - Jim Siemons, AF6PU
Field Day Chair - Larry Loomer, KI6LNB
Refreshments - Elizabeth Styles KG6HLV
Holiday Party - Misa Siemons KJ6BUE
Trailer - Lauren Styles, WA6CIE

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PRESIDENT'S QTC

MDARC Friends:

The world is going digital, and amateur radio is headed that way as well. Some of us old coots are being dragged kicking and screaming into the digital age, while others are leaping over beer barrels to get to it. This is not to suggest that analog ham radio is going away anytime soon, or even being used less. But it's clear that digital technologies are getting more popular. This is helped along as equipment and knowledge trickles down from the commercial and government fields and becomes more affordable.

There are two main categories of digital ham radio; digital voice and digital data. We've had some presentations at our Club meetings on digital voice (D-Star, DMR, etc.). So this month, our presenter will talk about a digital data technology that's rapidly growing in the ham world, especially in this area. It's formally known as the Narrow Band Emergency Messaging System (NBEMS). It's more popularly known by the primary software that's used, fldigi. Klaus Berkner, K6KHB, is the Exercise Coordinator for Contra Costa County's Auxiliary Communications Service (ACS) group; and is an expert on deploying and using fldigi. At our next Club meeting, he will tell us all about it and its associated utilities as "A Way to Quickly Move Message Traffic in Emergencies". Check out the full description on our [Speakers web page](#). Even if you're a die-hard analog ham, it's worth learning what all this stuff is about. We'll see you there August 19th.

Our Technical Committee is moving along very well, with several items of good news. They've talked for some time about the need to have direction finding (DF) capability in the Club. So they've now formed a DF group and named a chair, Jim Blair, K6EFR. If you're interested in direction finding, transmitter hunting, fox hunting, tracking down interfering signals, or similar technologies, please let Jim know at jim@creekmonkey.com. He's already working on plans for the group's first meeting.

Another piece of good news is that the ongoing issue of our insurance with the South Peak repeater site manager has been finalized. We are in full compliance with them and can move forward. Also, all our repeaters were recently re-coordinated with NARCC (Northern Amateur Relay Council of California). Further, Jim Siemons, AF6PU, the Committee Chair, reports that the digital amateur television (DATV) system is getting better and better, with 4 crystal clear channels available for content. If you haven't tried DATV, you should. See our [ATV web page](#). Finally for now, they've been researching the best way to improve the internet link to North Peak, and are nearing a solution. Hopefully, we can give a final update next month.

Pacificon is fast approaching and registrations are picking up. Hotel rooms at the Pacificon rate are going fast. In fact, we've had to ask the hotel to increase the number of rooms available at our rate, more than once. So if you're planning to stay at the San Ramon Marriott, get your reservation in soon. The best way is with the link on Pacificon's [Hotel web page](#). Our rate is guaranteed only until September 9th, 2016; and then only if rooms are still available in our allocation, so don't delay. Also, the deadline for pre-registration for the conference itself is Oct. 3.

Wonder what's happening at Pacificon? Check the web site at <http://pacificon.org/>. New information is being added more frequently, as we get closer to the date and details get confirmed. So if you haven't seen it recently, check back.

Also, we now have a wonderful new PACIFICON 2016 Introductory Video, courtesy of Randy Hall, K7AGE. It's only a minute and 13 seconds long, so go to [Pacificon's home page](#) and click on the link to take a look at it. Randy is well known in the ham world and has hundreds (thousands?) of ham-related videos on his [YouTube channel](#). He's also a frequent Pacificon attendee. Last year, he created a video on our Special Event Station and its unique antenna system. Take a look at that one, too, with the link on the Pacificon [Special Event Station web page](#).

(CONTINUED ON FOLLOWING PAGE)

The Training and Education Committee has just begun a course for people wanting to upgrade to Amateur Extra license class. There are a bunch of people registered for the class now (25 or more). Even so, if you'd like to get your Extra, they might be able to slip you in. Send an email right away to hamradioclass@gmail.com and let them know.

It's that time of year again – election season. No, not that election; the one that really matters. The MDARC Board of Directors election. The positions for all officers (President, Vice-President, Secretary, Treasurer), the Emergency Communications Coordinator and two of the four Directors at large will up for election. The election will be held at the November meeting. However, the Bylaws require that a nomination committee be appointed before this month's Club meeting; that nominations be accepted at the September meeting; and that the slate of candidates be published in the October and November editions of the Carrier. So we're starting now. This is an opportunity for all Club members to help keep us strong and viable and to influence the direction we take. The Nomination Committee Chair, Frank O'Leary, KF6FRJ, is tasked with forming a committee and developing a slate of candidates. If you would like to help Frank select this year's nominees, or if you you're interested in being on the Board, please contact Frank at a Club meeting or at danvillepostman@live.com.

We still have 5 Public Service events to support this year. The Alcatraz Challenge Triathlon (Swim/Run/Bike), a parade, two bike rides and a horse trail ride all need communicators to help keep everyone safe. See our [Public Service web page](#) for details and to sign up to help.

As you can see, it's a busy summer for MDARC, as usual. Join in the fun. Pick a committee, a little job, a topic. Join us and get involved. I think you'll be glad you did. I know the Club will.

73 until next time,

Mike Patterson, N6JGA
President



JUSTIN LAVIS, KE6GKQ

General Meeting Minutes July 15, 2016

Presided over by: President Mike Patterson N6JGA
Recorded by: Richard W Fletcher, AF9RF, Secretary
Meeting location: Our Saviors Lutheran Church 1035 Carol Lane Lafayette, Ca.
Meeting was called to order at 7:30PM PST

A pledge of allegiance was performed at this time.

General Meeting Minutes from our June 17th meeting were approved by club members.

Officers Reports

President - Board minutes recorded at our July 11th meeting will be posted in next month's Carrier.

Reminder was made of our Round Table July 20th fundraiser. 15% of proceeds go back to club.

Vice President - A speaker is assigned for August. It is Klas Berkner: subject is FL Digi Basics. September and November programs remain un-scheduled.

Secretary - July Board meeting minutes were approved.

Treasurer - Reported on monthly resulting balances.

Lauren Stiles, WA6CIE, reported on the history and status of the club trailer. It is currently parked at the Salvation Army complex in Concord. Members spoke with him about possible uses and ways of supporting it.

Emergency Communications - We, as a club, are working on a statement of purpose and uses.

Field Day Larry Loomer, KI6LNB, explained operations and food for the group as well as working times and schedules. He took questions from the group. WA6CIE, spoke about having a Field Day Committee formed to do advance planning for the upcoming Field Day so that, in future years, Field Day would be sure to have appropriate leadership available on the weekend of Field Day.

Education We have a current Extra License class and have 25 students enrolled. More students were called for. License Testing Chairman Larry Loomer, KI6LNB, reported one new technician passed his license test this evening and one upgrade to amateur extra.

Public Service Committee Chairman, Pete Harris, KE6ZIW, made a report that there are 5 remaining public service events listed on the MDARC website that all hams are invited to participate in.

Pacificon There was a report about public service events and Tech Committee activities occurring during Pacificon. We also heard a report that programs were full for this year.

A call for unfinished business went unanswered as did a call for new business.

The meeting was adjourned at 8:12pm PDT.

What followed was a program presented by George Hughes, W0WEB about emergency communication. He concluded with a showing of a sophisticated mobile communications vehicle.

Respectfully submitted,
Richard Fletcher, AF9RF
Secretary

The FCC Technical Advisory Committee sought comments under Docket 16-191 as part of their investigation into repeated complaints about the noise problem within the radio spectrum. The Association of Federal Communications Consulting Engineers wrote:

“If you believe that the explosion of ‘incidental radiators’ such as LED traffic lights, electronic lighting ballasts, switching power supplies, poorly-maintained power lines, etc. are increasingly polluting the radio spectrum and causing widespread interference to licensed services, NOW is the time to say something.”

The following comments on Docket 16-191 were filed with the Federal Communications Commission by N4DLA (comments were due by August 11, 2016).

What if someone drove a dump truck load of trash into your neighborhood and emptied it into your front yard? You would be very upset, I am sure.

Well, that is exactly what is happening to many radio spectrum users due to the exponential increase in radio frequency interference (RFI) in the United States over the past ten years. The trash in your front yard is emblematic of the pollution of the finite government-regulated radio spectrum caused by the RFI generated by poorly-constructed electrical devices which aren't even supposed to be any type of transmitter. The Federal Communications Commission (FCC) can't seem to stop this pollution, despite their legislated regulatory authority to do so.

In 2010, a neighbor had a light which he claimed he used to stimulate the growth of coral in an aquarium within the living room of a condominium right next to mine. When he turned it on, the light obliterated all reception in the 530 KHz to 1710 KHz AM broadcast band...even though the tank was several dozen feet away from where my radio was! I was able to contact the unit's tenant but he never gave me the make or model of the light nor where he purchased it. The tenant has since moved, taking his RFI with him.

In 2016, the tenants in the condominium above me obtained an unknown consumer device (some sort of light, I suspect) which obliterates reception in the FM radio broadcast band from 88 MHz to 108 MHz...the RFI is even received on a portable radio outside. The interference disappears late at night when the tenant turns off their unit's lights in their kitchen area. The absentee landlord is uncooperative and I have been unable to identify the offending device. However, I find it extremely unusual that a consumer device can cause interference to FM broadcast reception in such a way due to the way FM signals are processed within a radio receiver. The unknown device also causes minor interference to the AM broadcast band.

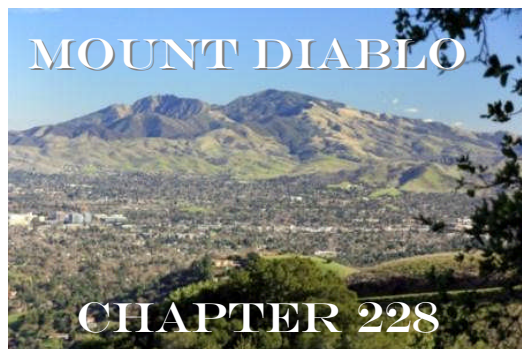
In July 2016, I began to receive strong RFI which appeared as a pulsing noise in the 144 MHz amateur radio band. It sounded like a switching power supply. I used my 11 element 144 MHz beam on my radio shack's roof and pinpointed the direction the RFI was coming from. Then, I took my portable Radio Shack PRO-97 VHF/UHF scanning receiver and I walked down the hill towards a home over 150 feet away from my shack. The noise emitted by this house was extremely loud (received RFI all the way to their property line) and was worst in the 125 MHz AM aircraft radio band. I went back to the shack and tuned it on my Icom R7000 30 MHz to 2 GHz all-mode receiver which is connected to a VHF discone on the garage roof. The RFI seemed to be strongest on 125.0 MHz AM. I don't have a spectrum analyzer or field strength meter (the persons I do know who have them live over 100 miles away). I instructed the cooperative neighbor to take a portable FM radio, tune it to 108 MHz and walk around the house to find the source. He IMMEDIATELY found the noise source, his newly-acquired USB wall outlets from Home Depot ! He recently had several of them installed by an electrician. Fortunately, the homeowner and I researched the problem and the homeowner found an improperly-grounded switch which he promptly fixed...and the RFI promptly disappeared!

(CONTINUED ON THE FOLLOWING PAGE)

On August 4, 2016, while sitting in Oakland International Airport's Terminal One near gate 4, I turned on the same PRO-97 receiver and tuned it to 125.0 MHz AM. The same noise I encountered at the offending residence generated by the USB wall outlets was inside the airport terminal...smack in the middle of the VHF aircraft band! The gate area had numerous USB wall outlets installed in the seating area. I wonder what the Federal Aviation Administration would think of this RFI?

My comments are an 'SOS' to the FCC regarding this unprecedented and pervasive pollution to the radio spectrum. The person who emptied the dump truck full of trash on to your lawn is in violation of the law and so are the manufacturers of these RFI-emitting devices. The FCC needs to flex their regulatory authority and "book-em, Danno!"

NOTE: An ARRL member is also a member of the FCC Technical Advisory Group and the ARRL has also filed comments on this docket...see ARRL Bulletin 30 dated August 16, 2016.



The newly formed Mount Diablo Chapter 228 of the Quarter Century Wireless Association held its inaugural meeting on July 2, 2016.

The chapter meets at 11:00 a.m. on the fourth Saturday of every month at Legends Restaurant, Diablo Creek Golf Course, 4050 Port Chicago Highway, (at Highway 4), Concord, CA. Our next meeting is scheduled for Saturday August 27, 2016. Membership is free.

We welcome all QCWA members, with or without local chapter affiliations.

Our membership chairman is Art Lebermann, W6REQ, artleb@earthlink.net, (415) 748-8266. Art is happy to hear from any interested persons and would place you on our email list for information of future meetings and other chapter activities.

73,
Ron Luttringer
K6XC

HAM RADIO OUTLET

14 STORE BUYING POWER!

ICOM



IC-7600 | All Mode Transceiver

- 100W HF/6m Transceiver, gen cov. receiver • Dual DSP 32 bit • Three roofing filters- 3, 6, 15kHz • 5.8 in WQVGA TFT display • Hi-res real time spectrum scope



IC-7200 | HF Transceiver

- 160-10M • 100W • Simple & tough with IF DSP • AGC Loop Management • Digital IF Filter • Digital Twin PBT • Digital Noise Reduction • Digital Noise Blanker • USB Port for PC Control



IC-7100 | All Mode Transceiver

- HF/50/144/430/440 MHz Multi-band, Multi-mode, IF DSP • D-STAR DV Mode (Digital Voice + Data) • Intuitive Touch Screen Interface • Built-in RTTY Functions



ID-5100A | VHF/UHF Dual Band Digital Transceiver

- Analog FM/D-Star DV Mode • SD Card Slot for Voice & Data Storage • 50W Output on VHF/UHF Bands • Integrated GPS Receiver • AM Airband Dualwatch • FM Analog/DV Repeater List Function

ID-51A | VHF/UHF Dual Band Transceiver

- 5/2.5/1.0/0.5/0.1W Output • RX: 0.52-1.71, 88-174, 380-479 MHz** • AM/FM/FM-N/WFM/DV • 1304 Alphanumeric Memory Chls • Integrated GPS • D-STAR Repeater Directory • IPX7 Submersible



KENWOOD



TS-590SG | HF/50MHz Transceiver

- Equipped with 500 Hz/2.7 kHz roofing filter as standard • ALC derived from TS-990S eliminating spike issues • Antenna output function (shared with DRV connector) • CW - morse code decoder function



TM-D710G | 2M/440 Dualband

- V+V/V+U/U+U operation • Built-in GPS • Built-in TNC for APRS & DX-Cluster operation • 50W 2M & UHF • 1,000 memories • Dual receive • Green or amber backlight colors • Latest APRS firmware w/new features • Sky Command II remote functions



TM-V71A | 2M/440 DualBand

- High RF output (50W) • Multiple Scan • Dual receive on same band (VxV, UxU) • Echolink® memory (auto dialer) • Echolink® Sysop mode for node terminal ops • Invertible front panel • Choice of green/amber for LCD panel • 104 code digital code squelch



TM-281A | 2 Mtr Mobile

- 65 Watt • 200 Memories • CTCSS/DCS • Mil-Std specs • Hi-quality audio

TH-F6A | 2M/220/440

- Dual channel receive • .1 - 1300 MHz (cell blocked) RX • FM, AM, SSB • 5W 2M/220/440 TX, FM • 435 Memories • Li-Ion Battery



YAESU
The radio



FT-991 | HF/50MHz/2M/440 Transceiver

- 160 M-440MHz - SSB/CW/FM/C4FM Digital/AM/RTTY/PSK • 100 W (2M/440: 50 Watts) • 3.5" TFT full-color touch panel operation • High speed spectrum scope • Roofing filters: 3kHz & 15kHz • 32-bit high speed floating point IF DSP



FTDX1200 | 100W HF + 6M Transceiver

- Triple Conversion Receiver With 32-bit Floating Point DSP • 40 MHz 1st IF with selectable 3 kHz, 6kHz & 15 kHz Roofing Filters • Optional FFT-1 Supports AF-FFT Scope, RTTY/PSK31 Encode/Decode, CW Decode/Auto Zero-In • Full Color 4.3" TFT Display



FT-450D | A100W HF + 6M Transceiver

- 100W HF/6M • Auto tuner built-in • DSP built-in • 500 memories • DNR, IF Notch, IF Shift



FTM-400DR | 2M/440 Mobile

- Color display-green, blue, orange, purple, gray • GPS/APRS • Packet 1200/9600 bd ready • Spectrum scope • Bluetooth • MicroSD slot • 500 memory per band

FT-60R | 2M/440 5W HT

- Wide receiver coverage • AM air band receive • 1000 memory channels w/alpha labels • Huge LCD display • Rugged die-cast, water resistant case • NOAA severe weather alert with alert scan



5 Ways to Shop!

- RETAIL LOCATIONS - Store hours 10:00AM - 5:30PM - Closed Sunday
- PHONE - Toll-free phone hours 9:30AM - 5:30PM
- FAX - All store locations
- ONLINE - WWW.HAMRADIO.COM
- MAIL - All store locations

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(800) 444-7927

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WWW.HAMRADIO.COM

New Store!

Contact HRO for promotion details. Toll-free including Hawaii, Alaska and Canada. Call will be routed to the nearest store. All HRO 800-lines can assist you. If the first line you call is busy, you may call another. AZ, CA, CO, GA, VA residents add sales tax. Prices, specifications and descriptions subject to change without notice.



The Carrier

Newsletter of the Mt. Diablo Amateur Radio Club

P.O. Box 23222

Pleasant Hill, CA 94523

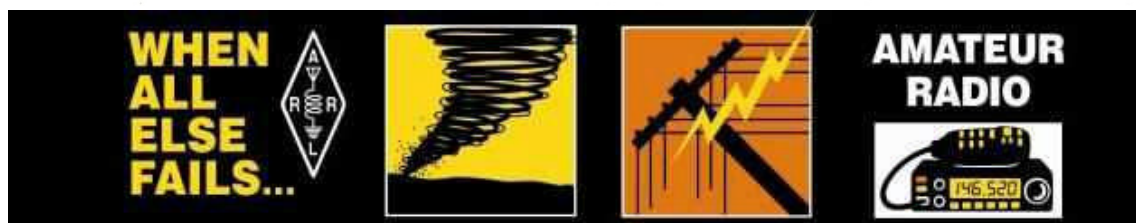
www.mdarc.org



FIRST CLASS



Affiliated Club



<https://www.facebook.com/mdarc.org>

W6CX Nets

Monday 7:00 pm Washington High School Net 147.060+

Monday 8:00 pm SATERN Net 147.060+

Thursday 7:30 pm MDARC Club Net 147.060+

Thursday 8:00 pm Amateur Television Net 147.060+

Tuesday 7:30 pm Fat City 10 meter USB/CW Net 28.420 MHz

FM 147.060 MHz + / PL 100Hz - EchoLink: W6CX-R /133896, IRLP: 3057
224.780 MHz - / PL 77Hz 441.325 MHz + / PL 100Hz

D-STAR 145.000 offset plus 2.5 MHz

<https://w6cx.dstargateway.org/> Digital ATV Output 1244.500

Digital ATV Input 1292.500

ATV Inputs: 1289.25 MHz AM; 1270.000 FM pl 192.8 915.0 AM 427.0 AM

ATV Internet Stream: <http://www.w6cxatv.net/live>

Contra Costa County Emergency Communications Nets

Every Thursday

<http://www.coco-races.org/meetings/nets/>

6:35 pm HF Countywide 3.893 MHz LSB

6:45 pm West County 145.110-- (82.5 PL)

7:00 pm Central County 145.680 Simplex

7:00 pm East County 146.535 Simplex

7:00 pm South County 146.355+ (77.0 PL)

7:20 pm Countywide 145.490-- (107.2 PL)

or 147.735+ (107.2 PL)

or 145.410 -- (107.2 PL)

Concord Auxiliary Radio Emergency Service (CARES)

Wednesday 8:00pm 147.405 Simplex

August and September 2016 Club Calendar

Friday August 19, 2016

7:30pm MDARC General Meeting -

Our Saviors Lutheran Church, 1035 Carol Lane, Lafayette

SEPTEMBER MDARC Technical Committee CANCELLED DUE TO HOLIDAY

Monday September 12, 2016 7:30pm MDARC Board Meeting (**NOTE DATE CHANGE DUE TO HOLIDAY**)
Black Bear Restaurant, 700 Bancroft Avenue, Walnut Creek

Friday September 16, 2016 7:30pm MDARC General Meeting
Our Saviors Lutheran Church, 1035 Carol Lane, Lafayette